

**MULTIMEDIA**



**UNIVERSITY**

**STUDENT ID NO**

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

**TRIMESTER 1, 2019/2020**

### **MCC1013 – 3D MODELLING & PRINTING**

(All sections / Groups)

15 OCTOBER 2019

9.00 a.m – 11.00 a.m

( 2 Hours )

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#### **INSTRUCTIONS TO STUDENTS**

1. This question paper consists of 4 pages including this cover page with 17 questions only.
2. Answer **ALL** questions. All questions carry different marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**SECTION A (10 Marks)**

Question 1 – 10, Multiple choice question. Please choose the correct answer.

1. 3-dimensional objects in 3DS Max consist of
  - A. Weight and height
  - B. Height and depth
  - C. Weight, height and depth
  - D. Width, height and depth
2. Which of the following best describe the 3-dimensional graphics on a computer screen?
  - A. A data set of codes
  - B. Two dimensional representation of three dimensional objects
  - C. Immersive visuals of virtual objects
  - D. Combination of RGB colours that produces coloured virtual objects
3. What does the term VRML stands for?
  - A. Virtual Reality Modelling Language
  - B. Virtual Realistic Modelling Language
  - C. Virtual Modelling Language
  - D. Virtual Realistic Modern Language
4. Union and intersection are \_\_\_\_\_ operations.
  - A. Merge
  - B. Lathe
  - C. Boolean
  - D. Chamfer
5. In 3DS Max, pressing the shortcut 'M' key will
  - A. Rescale the object
  - B. Open the material editor
  - C. Open the viewport window
  - D. Move an object about in the scene

**Continued**

6. Which nozzle size is suitable to use in order to print a small and detail jewelry like a ring?
- A. 0.10mm
  - B. 0.25mm
  - C. 0.40mm
  - D. 0.60mm
7. PLA is an abbreviation for?
- A. Polylactic acid
  - B. Polypropylene acid
  - C. Polyvinyl acid
  - D. Polystyrene acid
8. Which of the following advantage is not referring to PLA?
- A. Stiff
  - B. High strength
  - C. Multicolour
  - D. Heat resistant
9. How to solve a nozzle clog problem?
- A. Lavelling Method
  - B. Sonic Method
  - C. Atomic Method
  - D. Warping Method
10. CURA is a \_\_\_\_\_ software for ULTIMAKER 3D printer.
- A. three dimensional (3D)
  - B. chain
  - C. correction
  - D. slicer

**Continued**

**SECTION B (10 Marks)**

Question 11-13, Subjective questions.

11. By default, 3ds Max has cameras that let you view your scene in a panel, fill in the blanks with the appropriate type of view. (3 Marks)
- \_\_\_\_\_ view = side, top, front that correspond to the default scene views.  
\_\_\_\_\_ view = the user viewport which consist of isometric, dimetric and trimetric.  
\_\_\_\_\_ view = the human eye view which creates more natural view with distortion
12. The different stages of 3D production are divided into Pre-production, Production and Post Production. List down any two steps in the Production stage (2 Marks)
13. List 5 materials other than PLA that can be used for ULTIMAKER 2+. (5 Marks)

**SECTION C (20 Marks)**

Question 14-17, Short essay questions.

14. There are 3 types of clone options in 3DS Max. Explain each of these cloning options in 3DS Max ;
- Copy (1 Mark)
  - Instance (1 Mark)
  - Reference (3 Marks)
15. Polygons are a closed sequence of three or more edges connected by a surface. Describe 3 advantages and 2 disadvantages of polygonal modelling in comparison to NURBS modelling. (5 Marks)
16. Describe 5 usages of 3d printing in the industry.(5 Marks)
17. After making the 3D model, importing it into CURA and slicing it, and saving it to an SD card, what steps come next? (5 Marks)

**END OF QUESTION PAPER**